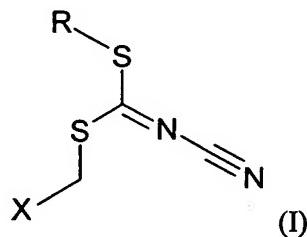


AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of the claims in the application:

1. (Previously Presented) A method for controlling the growth of at least one fungus on a tanned hide comprising the step of contacting a hide prior to, during and after tanning with a cyanodithiocarbimate of formula (I):



X is a halogen;

R is a substituted or unsubstituted C₁-C₁₄ alkyl group, a substituted or unsubstituted C₂-C₁₄ alkenyl group, a substituted or unsubstituted C₂-C₁₄ alkynyl group, a substituted or unsubstituted group defined by Y-Ar-(CH₂)_m- or by Z-(CH₂)_n-;

Ar is a substituted or unsubstituted aryl group selected from phenyl, and naphthyl;

Y is H, halogen, NO₂, R¹, R¹O, or R¹R²N;

Z is NC, R¹O, R¹OC(O), or R¹OCH₂CH₂(OCH₂CH₂)_p

m ranges from 0 to 3;

n ranges from 0 to 3;

p ranges from 0 to 3; and

R¹ and R² are independently H, substituted or unsubstituted C₁-C₅ alkyl;

in an amount effective to control the growth of at least one fungus on the tanned hide.

2. (Previously Presented) A method of claim 1, wherein:

X is Cl, Br, or I;

R is a substituted or unsubstituted C₁-C₇ alkyl group, a substituted or unsubstituted C₂-C₇ alkenyl group, a substituted or unsubstituted group defined by Y-Ar-(CH₂)_m- or by Z-(CH₂)_n-;

Ar is phenyl;

Y is H, Cl, Br, I, NO₂, R¹, R¹O, or R¹R²N;

Z is NC, R¹O, R¹OC(O), or R¹OCH₂CH₂(OCH₂CH₂)_p

m is 0 or 1; and

R¹ and R² are independently H, methyl, or ethyl.

3. (Currently Amended) A method of claim 1, wherein

X is Cl and R is -CH₃, -(CH₂)₂CH₃, -(CH₂)₃CH₃, -(CH₂)₅CH₃, -(CH₂)₇CH₃, -(CH₂)₁₁CH₃, -CH(CH₃)₂, -CH(CH₃)(CH₂)₃CH₃, -(CH₂)₂OH, -(CH₂)₃OH, -(CH₂CH₂O)₂CH₂CH₂OH, -(CH₂)₂CO₂H, -CH₂CH₂CN, -CH₂CH=CH₂, or ~~CH₂C₆H₅~~
~~-CH₂C₆H₅~~;

X is Br and R is -(CH₂)₃CH₃, or -CH₂C₆H₅; or

X is I and R is -(CH₂)₃CH₃, or -CH₂C₆H₅.

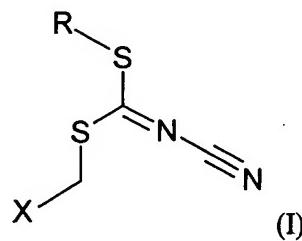
4. (Previously Presented) A method of claim 1, wherein the cyanodithiocarbamate of formula (I) is hexyl chloromethyl cyanodithiocarbamate.

5. (Previously Presented) A method of claim 1, wherein the leather substrate is a wet blue hide a wet white hide, a vegetable-tanned hide or an oil-tanned hide.

6. (Previously Presented) A method of claim 3, wherein the leather substrate is a wet blue hide a wet white hide, a vegetable-tanned hide or an oil-tanned hide.

7. (Previously Presented) A method of claim 4, wherein the leather substrate is a wet blue hide a wet white hide, a vegetable-tanned hide or an oil-tanned hide.

8. (Previously Presented) A method for controlling the growth of microorganisms on a hide during a leather tanning process comprising the step of contacting a hide susceptible to fungal growth with a tanning liquor containing a cyanodithiocarbamate of formula (I):

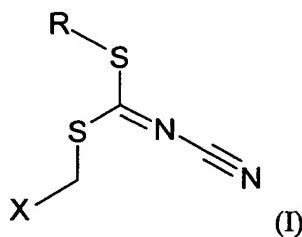


X is a halogen

R is a substituted or unsubstituted C₁-C₁₄ alkyl group, a substituted or unsubstituted C₂-C₁₄ alkenyl group, a substituted or unsubstituted C₂-C₁₄ alkynyl group, a substituted or unsubstituted group defined by Y-Ar-(CH₂)_m- or by Z-(CH₂)_n-;
Ar is a substituted or unsubstituted aryl group selected from phenyl, and naphthyl;
Y is H, halogen, NO₂, R¹, R¹O, or R¹R²N;
Z is NC, R¹O, R¹OC(O), or R¹OCH₂CH₂(OCH₂CH₂)_p
m ranges from 0 to 3;
n ranges from 0 to 3;
p ranges from 0 to 3; and
R¹ and R² are independently H, substituted or unsubstituted C₁-C₅ alkyl;
in an amount effective to control the growth of at least one fungus on the hide.

9. (Previously Presented) A method of claim 8, wherein
R is a substituted or unsubstituted C₁-C₇ alkyl group, a substituted or unsubstituted C₂-C₇ alkenyl group, a substituted or unsubstituted group defined by Y-Ar-(CH₂)_m- or by Z-(CH₂)_n-;
Ar is phenyl;
Y is H, Cl, Br, I, NO₂, R¹, R¹O, or R¹R²N;
Z is NC, R¹O, R¹OC(O), or R¹OCH₂CH₂(OCH₂CH₂)_p
m is 0 or 1; and
R¹ and R² are independently H, methyl, or ethyl.
10. (Previously Presented) A method of claim 8, wherein
X is Cl and R is -CH₃, -(CH₂)₂CH₃, -(CH₂)₃CH₃, -(CH₂)₅CH₃, -(CH₂)₇CH₃, -(CH₂)₁₁CH₃, -CH(CH₃)₂, -CH(CH₃)(CH₂)₃CH₃, -(CH₂)₂OH, -(CH₂)₃OH, -(CH₂CH₂O)₂CH₂CH₂OH, -(CH₂)₂CO₂H, -CH₂CH₂CN, -CH₂CH=CH₂, or -CH₂C₆H₅;
X is Br and R is -(CH₂)₃CH₃, or -CH₂C₆H₅; or
X is I and R is -(CH₂)₃CH₃, or -CH₂C₆H₅.
11. (Previously Presented) A method of claim 8, wherein the cyanodithiocarbamate of formula (I) is hexyl chloromethyl cyanodithiocarbamate.
12. (Previously Presented) A method of claim 8, wherein the hide is a wet blue hide, a wet white hide, a vegetable-tanned hide or an oil-tanned hide.

13. (Previously Presented) A method of claim 10, wherein the hide is a wet blue hide, a wet white hide, a vegetable-tanned hide or an oil-tanned hide.
14. (Previously Presented) A method of claim 11, wherein the hide is a wet blue hide, a wet white hide, a vegetable-tanned hide or an oil-tanned hide.
15. (Previously Presented) A method of claim 8, wherein the tanning liquor is a pickling liquor.
16. (Previously Presented) A method of claim 8, wherein the cyanodithiocarbamate of formula (I) is present in the tanning liquor in an amount ranging from about 5 to about 500 parts per million.
17. (Previously Presented) A liquor for use in a leather-tanning process comprising a cyanodithiocarbamate of formula (I):



X is a halogen;

R is a substituted or unsubstituted C₁-C₁₄ alkyl group, a substituted or unsubstituted C₂-C₁₄ alkenyl group, a substituted or unsubstituted C₂-C₁₄ alkynyl group, a substituted or unsubstituted group defined by Y-Ar-(CH₂)_m- or by Z-(CH₂)_n-;

Ar is a substituted or unsubstituted aryl group selected from phenyl, and naphthyl;

Y is H, halogen, NO₂, R¹O, or R¹R²N;

Z is NC, R¹O, R¹OC(O), or R¹OCH₂CH₂(OCH₂CH₂)_p;

m ranges from 0 to 3;

n ranges from 0 to 3;

p ranges from 0 to 3; and

R¹ and R² are independently H, substituted or unsubstituted C₁-C₅ alkyl.

18. (Previously Presented) A liquor of claim 17, wherein

R is a substituted or unsubstituted C₁-C₇ alkyl group, a substituted or unsubstituted C₂-C₇ alkenyl group, a substituted or unsubstituted group defined by Y-Ar-(CH₂)_m- or by Z-(CH₂)_n;

Ar is phenyl;

Y is H, Cl, Br, I, NO₂, R¹, R¹O, or R¹R²N;

Z is NC, R¹O, R¹OC(O), or R¹OCH₂CH₂(OCH₂CH₂)_p

m is 0 or 1; and

R¹ and R² are independently H, methyl, or ethyl.

19. (Currently Amended) A liquor of claim 17, wherein
X is Cl and R is -CH₃, -(CH₂)₂CH₃, -(CH₂)₃CH₃, -(CH₂)₅CH₃, -(CH₂)₇CH₃,
(CH₂)₄CH₃ -(CH₂)₁₁CH₃, -CH(CH₃)₂, -CH(CH₃)(CH₂)₃CH₃, -(CH₂)₂OH,
-(CH₂)₃OH, -(CH₂CH₂O)₂CH₂CH₂OH, -(CH₂)₂CO₂H, -CH₂CH₂CN, -CH₂CH=CH₂, or
-CH₂C₆H₅;
X is Br and R is -(CH₂)₃CH₃, or -CH₂C₆H₅; or
X is I and R is -(CH₂)₃CH₃, or CH₂C₆H₅. -CH₂C₆H₅.
20. (Previously Presented) A liquor of claim 17, wherein the cyanodithiocarbimate of formula (I) is hexyl chloromethyl cyanodithiocarbimate.
21. (Previously Presented) A liquor according to claim 17, wherein the liquor is selected from a pickling liquor, a chrome-tanning liquor, a white-tanning liquor, a vegetable-tanning liquor, an oil-tanning liquor, a post-tan washing liquor, a retanning liquor, a dye liquor, and a fatliquor; and wherein the microorganism is algae, fungi, or bacteria; and the cyanodithiocarbamate of formula (I) is present in the tanning liquor in an amount ranging from about 5 to about 500 parts per million.
22. (Previously Presented) A liquor according to claim 19, wherein the liquor is selected from a pickling liquor, a chrome-tanning liquor, a white-tanning liquor, a vegetable-tanning liquor, an oil-tanning liquor, a post-tan washing liquor, a retanning liquor, a dye liquor, and a fatliquor; and wherein the microorganism is algae, fungi, or bacteria; and the cyanodithiocarbamate of formula (I) is present in the tanning liquor in an amount ranging from about 5 to about 500 parts per million.
23. (Previously Presented) A liquor according to claim 20, wherein the liquor is selected from a pickling liquor, a chrome-tanning liquor, a white-tanning liquor, a vegetable-

tanning liquor, an oil-tanning liquor, a post-tan washing liquor, a retanning liquor, a dye liquor, and a fatliquor; and wherein the microorganism is algae, fungi, or bacteria; and the cyanodithiocarbimate of formula (I) is present in the tanning liquor in an amount ranging from about 5 to about 500 parts per million.

24. (Previously Presented) A liquor of claim 21, wherein the liquor is a pickling liquor.

25. (Previously Presented) A liquor of claim 23, wherein the liquor is a pickling liquor.

26. (Previously Presented) A liquor of claim 17, further comprising a solvent selected from methyl ethers of glycols, M-pyrol, and petroleum distillates; and a diluent selected from soybean oil, pine tree oil, cottonseed oil, corn oil, canola oil, peanut oil, palm oil, rice oil, olive oil, tung nut oil, castor bean oil, linseed oil, citrus oil, and datenut oil.

27-30. (Cancelled)